



Governor Terry E. Branstad
Lt. Governor Kim Reynolds

Geri D. Huser, Chair
Elizabeth S. Jacobs, Board Member
Nick Wagner, Board Member

September 9, 2016
File: E-20994, Amendment 20

ITC Midwest LLC
Attn.: Leanna D. Whipple
100 East Grand Avenue, Suite 230
Des Moines, IA 50309

Dear Mrs. Whipple:

On August 8, 2016, in compliance with Iowa Code chapter 478, you filed with the Iowa Utilities Board a petition for amendment of electric franchise to rebuild and increase voltage of 3.54 circuit miles (1.17 miles double circuit and 1.2 miles single circuit) of existing 34.5 kV nominal voltage electric transmission line to 69 kV standards in Linn County, Iowa. The petition has been assigned to Docket No. E-20994, Amendment No. 20 (AM20); please identify this filing by this docket number in all future communications.

Staff review of the petition has identified several deficiencies, which must be corrected for processing to continue.

Note: When filing revision, except of Exhibit A, please file the related page(s) only.

1. The Petition

- a. Page 1, 2nd paragraph, line 2, please correct the company name as **IES Utilities, Inc.**, not as IES Utilities Company.
- b. Page 1, 3rd paragraph, line 3, in the middle of line, petitioned line length of 3.54 miles found not proper. Refer to comments of Exhibit A, and revise.
- c. Page 1, bottom paragraph, line 2, update the number of obtained easements.

2. Exhibit A

- a. Page 1, 2nd paragraph (in bold print), line 1, at the beginning of line, 1.20 miles found not proper. See comments below, and revise (if necessary).

b. Page 1, 3rd paragraph (in bold print), line 1, for clarity staff has suggested it to be revised as “The west end ~~point~~ **points** of this proposed double circuit line ~~is~~ **are** at a ~~point~~ **points** of electrical”. Second, same paragraph, line 2, toward the end of line, please revise as “... electric transmission ~~line~~ **lines** located at the”. Third, line 5, please change from “... west terminus ...” to “... west **termini** ...”. Fourth, line 6, similar to 1st comment above, please revise as “double circuit line ~~is~~ **are** at a ~~point~~ **points** of ...”. Fifth, same line 6, toward the end of line, you indicated of ITC substation called Prairie Creek. However, by our records, there are two transmission substations close to each other, CIPCO’s Prairie Creek Substation and ITC’s Prairie Creek Industrial Substation. Which one are you referring to? Please review, confirm, and revise (if needed).

c. Page 1, 4th paragraph, line 2, toward the end of line, you indicated of west corporate city limits which found not consistent with Exhibit B. Please revise. Second, same paragraph, line 4, near the end of line, Range 6 West found not correct. Please revise. Third, line 5, toward the end of line, for clarity staff has suggested it to be revised as “... east terminus of this proposed **single circuit** line”.

d. Page 1, following of 4th paragraph, but prior to bottom paragraph, please expand in regards of the east end point of north circuit of double circuit where said north circuit turns and goes north at the northeast quadrant of the intersection of Otis Road and 44th Street SE, and its east/north terminus.

e. Page 1, bottom paragraph, line 1, near the end of line, please revise as “... at a ~~point~~ **points** of electrical”. Second, same paragraph, line 2, in the middle of line, please revise as “... electric transmission ~~line~~ **lines** located ...”. Third, line 3, please refer to 1st comment above, and revise similarly. Fourth, line 9, in the middle of line, following of “... irregular Otis Road”, but before “adjacent to the northerly margin ...” please add to indicate that such point would be on private or public right of way (indicate one) after the line crossed irregular Otis Road.

f. Page 2, lines 10 thru 13 (about a line segment of 0.05 mile), you had indicated of line segment crossed Otis Road to the north side at a point 0.16 mile north of Section 30’s south quarter corner. However, what about a direction west of said south quarter corner. See Exhibit B, and revise or explain. Second, said line segment of 0.05 mile found too far off of and not consistent with Exhibit B. Please review and revise (if necessary).

g. Page 2, line 14, you indicated that after crossing Otis Road, the line continued northeasterly across the SE1/4 of Section 30. However, by Exhibit B, what about the east portion of SW1/4 of same Section 30? Please review and revise. Second, line 16; following of 1st comment above, the next line segment of 0.34 mile is then in questions. Please review and revise (if necessary), or explain.

h. Page 2, line 18, at the end of line, “0.16 mile west” found not consistent with Exhibit B. Please review and revise.

i. Page 2, line 21, near the end of line, “near the center of Indian Creek”. However, no such Indian Creek found in Exhibit B. Please revise, or explain. Second, same page 2, line 22, “west corporate city limits” found not correct. See Exhibit B, and revise.

j. Page 2, bottom paragraph, last line, 1.2 miles of single circuit found no longer correct. See comments above, and revise.

3. Exhibit B

a. Both ranges of R6W and R5W at top and bottom of map part, found not correct. Please revise.

b. Sections 31 and 30, T83N, R7W, along east side of 44th Street SE, line symbol and line designated number 1b found not consistent. Please correct. Second, the two back-to-back crossing of Otis Road found not consistent with Exhibit A (segments of 0.02 mile and 0.13 mile), and they looked very same length wise in Exhibit B. Please revise. Third, from the northeast quadrant of the intersection of Otis Road and 44th Street SE, going northeasterly to east end point, the proposed line is a single circuit. Therefore, it should be at different line symbol and line designated number to differentiate it from the proposed double circuit segment. Please revise.

c. The Legend, list of line symbols, following of 3rd comment of item 3.b. above, another line symbol would be needed for a single proposed 69 kV line. Second, same list, 1st line symbol, its definition, staff has suggested it to be revised as “Proposed **Double Circuit** 69/69 kV (Existing **double circuit** 34.5/34.5 kV to be removed)” for clarity and consistency.

d. Section 36, T83N, R7W, and Section 1, T82N, R7W (just south of the section’s north line), you had notes of “1a o dc tbr & tbdw w/ 1 o” which found no longer proper due to staff’s comment above (see item 3.c., 2nd comment). Therefore, staff has suggested them to be revised as “**1a o dc tbr**” (crossing out of “& tbdw w/ 1 o”). Second, following of 1st comment above, in the Legend, list of map symbols (in the upper right corner of Exhibit B), 12th symbol (tbdw) would be no longer needed. Please remove for clarity and simplicity. Third, other two notes of “2a o ub tbr & tbub”, staff has suggested them to be revised as “2a o ub tbr & tbub **on 1 o**” for clarity. Fourth, Section 36, SW1/4, and along the south side of Otis Road, you had shown line 1d (ITC’s 161 kV line) parallel and basically along south side of road which found not proper. By aerial photos, said line 1d is located and continued along/parallel to Union Pacific railroad track to Cedar Rapids east city limits line (near Section 36’s southwest corner). Please revise for accuracy.

e. In between Sections 31 and 32, T83N, R6W, along the east side of Cedar Bend Lane SW, you had shown a line symbol with an arrow, but no line designated number. Please indicate what it is. Second, near the southwest

quadrant of T-intersection of Cedar Bend Lane SW and Old River Road, you had indicated an existing line 3a. Is said line 3a crossed Old River Road and connected to such line commented in 1st comment above? If yes, then please revise to reflect that.

f. Section 30, T83N, R6W, SE1/4, the line segment apparently went southerly crossing Otis Road reflecting a segment next to last segment of Exhibit A (See Exhibit A, page 2, segment of 0.12 mile), found not consistent with Exhibit A which said “thence southeasterly”. Please review and revise, or explain.

Second, by aerial photos, apparently this line segment crossed underneath an existing double circuit 115 kV lines (115/115 kV) before it got to a point of double circuiting with 161 kV line going east (see Exhibit A, page 2, last line segment of 0.1 mile). Therefore, please provide all related drawings including any Plan and Profile (P&P), structure drawings, etc. for clearances verification.

g. Section 30, T83N, R6W, SE1/4, last segment of 0.1 mile (according to Exhibit A); it was not clear of where the east end of line 1d (ITC’s 161 kV line). Please revise for clarity. Second, by aerial photos, an existing double circuit 115/115 kV line (assumed to be lines 1c and 4a) is located north of the proposed line’s last segment, and is outside of Cedar Rapids city limits. By 199 IAC 11.2(1)”b”(6), please revise accordingly.

h. Section 6, T82N, R6W, the street name “Grove Rd” appeared not consistent with that of Iowa DOT County Map. Please review and revise.

i. The Legend, list of other companies and addresses, right column, 1st company, “City of Cedar Rapids Water” found not a correct company name. It apparently is **City of Cedar Rapids – Water Department**. Please review and revise, or explain. Second, same list, last company, Southwestco Wireless LP, was not found based upon the provided address of 480 Greenway Rd., Henderson, NV 89015. Please provide more information such as telephone number and/or name of contact personnel.

4. Exhibit C – Segment 1 of 4 (double circuit 69 kV w/ IPL 3-phase 12.5 kV ub)

a. Page 1, line 3, for clarity and consistency, staff has suggested it to be revised as “1.17 miles (**2.34 circuit miles**)”.

b. Page 1, line 4, R6W and R5W found not correct. Please revise.

c. Page 1, line 14, 1st filled-in blank, for clarity please indicate the approximate overall cable diameter (in inches) following of “... DNO-6071”.

d. Page 1, line 18, the middle two columns, the insulators’ catalog numbers appeared not proper. Usually, the insulator with tear drop blade (at conductor end) would be for small to medium angle structures, and the one with horizontal

clamp would be for tangent structures. Please review and explain. Second, their application was not found in structure drawings of this segment. Please explain.

e. Page 3, line 32, in addition to "This Docket", please indicate which circuit of the double circuit (Is it north/west circuit?).

f. Page 3, line 33, 2nd blank, please revise as "**Initial oper. @ 34.5 kVAC**".

g. Page 3, line 38, first three filled-in blanks, are they of new conductor to be used or existing conductor which would be transferred to new framed structures?

h. Page 3, line 41, the middle two columns. See item 4.d. above, and address.

i. Structure drawing 69DTNVP, vertical spacing of 8'-6", 7'-0", 7'-0", and 9'-0" to underbuild's crossarm mounting bolt (from mounting bolt to bolt) found not proper due to the lack of up-sweep angle of horizontal post insulators. Therefore, staff has suggested them to be revised to reflect the actual vertical spacing from conductor point to conductor point (perhaps from top phase's conductor point to middle phase's conductor point, and etc.). Second, the horizontal dimension of 14", 20", and 14" respectively from top phase to bottom phase, what are they for (clearances from pole surface to what part of horizontal post insulators)? Please explain. Third, please indicate phase-to-ground clearances (from conductor point to pole surface) along horizontal post insulators (at least one dimension on each side of pole or each circuit of double circuit). Fourth, horizontal post insulator's conductor ends, please refer to items 4.d. and 4.h. above, and address.

j. Structure drawing 69DASVP-L, please indicate a vertical spacing from bottom transmission phase's conductor point to underbuild mounting position. Second, post insulator's conductor end, please refer to items 4.a. and 4.h. above and address appropriately. Third, refer to item 4.i. above (3rd comment), and address such clearance of other side of pole or other circuit as well. Fourth, spacing from shield wire to top phase conductor was not clear due to unspecified dimension from pole top to actual shield wire. Please address. Fifth, there found just an arrow pointing to top dimensional line at pole top. What was it (the arrow) for?

k. Drawing 69ASGP1-D2V3-L, see 4.j. above (1st comment), and indicate such clearance between bottom phase of lower petitioned 69 kV to ub mounting position. Second, indicate a phase-to-ground clearance (conductor point to pole surface) along a suspension dead-end insulator of lower petitioned 69 kV circuit. Third, top petitioned 69 kV, post insulator (2'-3" long) found not consistent with page 1 of Exhibit C, line 18, 2nd or 3rd column from left. Please explain.

5. Exhibit C – Segment 2 of 4 (single circuit 69 kV w/ IPL 3-phase 12.5 kV ub)

a. Page 1, line 4, sub-line 2, incorrect range found. Please revise. Second, same page, line 5, "will be constructed" found not consistent with project scope (see Exhibit D) and Exhibit C, Segment 1 of 4, page 1, line 5. Please revise.

b. Structure drawing 69D2V3, a dimension of 46.8" and its dimensional line found too far off of where they intended for. Please revise. Second, 3'-0" vertical spacing between two (2) levels of underbuild mountings found not consistent with ub's drawing of 25UCF3o.dgn. Please revise or explain.

c. Are there any transmission switch structures at CIPCO 69 kV line tap in particular (NW1/4 NW1/4, Section 31, T83N, R6W)? If yes, then provide drawings.

d. UB's drawing 25UCF3o.dgn, 56" (4'-8") spacing between two levels of dead-end arms, found not consistent with that of transmission drawing of 69D2V3. Please explain.

6. Exhibit C – Segment 3 of 4 (single circuit 69 kV w/o ub)

a. Page 1, line 4, the range, R5W, found not correct. Please revise.

b. Page 1, line 5; please refer to item 5.a. above, 2nd comment, and revise.

c. Page 1, lines 16 thru 22, 2nd column from right. There found no angle structure drawing with such insulator application. Please explain.

d. Page 3, line 61. Refer to item 6.c. above, and revise or explain.

e. Structure drawing 69D2V3; see 5.b. above, 1st comment, and revise.

f. See item 3.f. above, 2nd comment, and provide all related drawings.

7. Exhibit C – Segment 4 of 4 (double circuit 161/69 kV w/o ub)

a. Page 1, line 4, "R5W" found not correct. Please revise. Second, same page, line 5; please refer to item 5.a. above (2nd comment), and revise.

b. Page 1, line 8, 2nd and 3rd filled-in blanks (typical and maximum spans) appeared not proper for this line segment of 0.1 mile (approximately 530 feet). Please explain.

c. Page 1, line 13, first three (3) filled-in blank; is new conductor or existing conductor being used in this segment?

d. Page 2, line 32, you indicated "This Docket" which found not proper. Apparently, the 161 kV line segment is not part of this amendment docket. Therefore, please indicate its present docket and granted franchise numbers.

e. Page 2, line 38, 3rd filled-in blank (45/7) found not correct for ACSR/SD type of conductor. SD conductor's stranding would consist of a number of steel wires

in the center (as core conductors), then number of trapezoidal wires per layer. Please revise including 4th filled-in blank (if needed).

f. Page 2, lines 44 and 45, 3rd column from left, found not correct. Please revise.

g. Page 3, line 61 found not consistent with Exhibit C, page 1, lines 16 thru 22, 2nd column from right. Please revise.

h. Page 3, line 62 also found not consistent with Exhibit C, page 1, lines 16 thru 22, far right column. Please explain.

i. Structure drawing 161-TNSP-L-U, vertical spacing between 161 kV circuit's bottom phase and proposed 69 kV line, please indicate such spacing specifically, not "Varies" as being shown in drawing. Note that due to the unknown up-sweep angle of 69 kV circuit's longest horizontal post insulator, please indicate such spacing from conductor point to conductor point (from 161 kV bottom phase conductor to the nearest point of proposed 69 kV circuit below). Second, the 161 kV insulator detail, for clarity and consistency please use 954 to **954000** or **954 kcmil**.

j. Structure drawing 161-TNSP-L-U, the lower circuit insulator detail, for clarity and consistency please indicate what voltage such insulator detail is for (currently, "kV Insulator Detail" is shown). Second, similar to item 7.i. above (2nd comment), please address "636" similarly. Third, the longest horizontal post insulator, please indicate a phase-to-ground (to pole surface) clearance along said post insulator. Fourth, following of 3rd comment above, please also indicate its manufacturer and catalog number directly on the insulator detail drawing.

8. Exhibit D

a. Page 1, 4th paragraph, line 2, in the middle of line, a misspelling of nominal found. Please correct. Second, same paragraph, line 17 ("Issued:" in bold print), incorrect date of July found, please correct. Third, line 18 ("Granted to:"), see item 1.a. above, and revise.

b. Page 2, page number at the bottom of page (32) found not correct. Please revise. Second, sub-paragraph (2), line 6 please revise with capital S for Mt. Vernon **S**ubstation. Third, same line 6, a capital S for **S**ection 25 would be needed. Please revise. Fourth, same line 6, ITC Midwest's Mt. Vernon Substation location (by section, township, and range) seemed not correct. Please review and revise (if needed). Fifth, same sub-paragraph, line 8, at the beginning of line, please revise **S**ection 3 with capital S for consistency. Sixth, line 9, near the end of line, misspelling of **primarily** found. Please correct.

c. Page 3, sub-paragraph (4), line 6, in the middle and at the end of line, misspelling of parallel and Prairie found. Please revise. Second, same page 3,

sub-paragraph (5), line 3, near the beginning of line, see 2nd comment of item 8.b. above, and revise similarly.

d. Page 4, top line (line 1), for clarity and consistency please add double space in between "199 IAC 11.4(5)." and "The".

9. Exhibit F

a. Exhibit F's list of mailing addresses, left column, 5th company's name, please refer to item 3.i. (1st comment) above and revise.

b. Exhibit F's list of mailing addresses, right column, 3rd company name and address, please refer to item 3.i. above (2nd comment), and address properly. Second, if different address was resulted, then please resend such notification letter according to a new address, revise the list, and provide this office a copy of resent letter.

10. Safety and Route

Due to our present inspection schedule of the petitioned line route, we will notify you at a later time if there were any safety concerns or questions along the line route.

If you have any questions, feel free to contact me at 515-725-7339 or at bao.nguyen@iub.iowa.gov

Sincerely,

/s/ Bao Nguyen

Bao Nguyen
Utilities Regulation Engineer
Safety and Engineering Section